

INFORMATION DISCLOSURE STATEMENT

Marie : Katsuro Tachibana et al.

App. No : 10/782,383

Filed: 19 February 2004

For : DELIVERY OF THERAPEUTIC

COMPOSITIONS USING ULTRASOUND

Examiner: Richard A. Schnizer

Art Unit : 1635

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Enclosed for filing in the above-identified application is a PTO/SB/08 Equivalent listing 137 references to be considered by the Examiner.

Except for References 123–131, all of the foreign and non-patent literature cited in the information disclosure statement filed herewith was cited in U.S. Patent Application 09/620,701 (filed 20 July 2000; now U.S. Patent 6,527,759), which is relied upon for an earlier effective filing date under 35 U.S.C. § 120. Therefore, copies of these references are not required under 37 C.F.R. § 1.98(d). Copies of References 123–131 are enclosed herewith. Applicants respectfully request that the Examiner consider all of the references cited in the information disclosure statement filed herewith.

Appl. No.

: 10/782,383

Filed

: 19 February 2004

Docket No. EKOS.8CP3DV1C4

Customer No. 20,995

This Information Disclosure Statement is being filed before the mailing date of a final action and before the mailing of a Notice of Allowance. This Statement is accompanied by the fees set forth in 37 C.F.R. § 1.17(p). The Commissioner is hereby authorized to charge any additional fees which may be required or to credit any overpayment to Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 25 aug 06

Kyle F. Schlueter

Registration No. 54,912 Attorney of Record

Customer No. 20,995

(310) 551-3450

2799202 080106

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Application No. 10/782,383

Filing Date February 19, 2004

First Named Inventor Katsuro Tachibana

Art Unit 1635

Examiner Richard A. Schnizer

EKOS.8CP3DV1C4

Attorney Docket No.

AUG 2 9 2006

(Multiple sheets used when necessary)
SHEET 1 OF 6

U.S. PATENT DOCUMENTS Document Number Pages, Columns, Lines Where Examiner Cite **Publication Date** Number - Kind Code (if known) Name of Patentee or Applicant Relevant Passages or Relevant Initials No. MM-DD-YYYY Example: 1,234,567 B1 Figures Appear 1 3,433,226 03-18-1969 Boyd 2 06-07-1977 4,027,659 Slingluff 3 4,040,414 08-09-1977 Suroff 4 03-16-1982 Colley et al. 4,319,580 5 10-19-1982 Colley et al. 4,354,502 6 04-23-1985 4,512,762 Spears 7 4,531,943 06-30-1985 Val Tassel et al. 03-1986 8 4,573,470 Samson et al. 9 04-15-1986 Silverstein et al. 4,582,067 06-14-1988 Wuchinich et al. 10 4,750,902 11 08-30-1988 Kost et al. 4,767,402 12 4,780,212 10-25-1988 Kost et al. 02-28-1989 13 4,808,153 Parisi 14 4,870,953 10-03-1989 don Micheal et al. 15 4,877,031 10-31-1989 Conway et al. 04-17-1990 16 4,917,102 Miller et al. 17 4,917,088 04-17-1990 Crittendon 18 4,920,954 05-01-1990 Alliger et al. 19 4,924,863 05-15-1990 Sterzer 20 4,936,281 06-26-90 Stasz 21 4,955,863 09-11-1990 Walker et al. 22 4,971,991 11-20-1990 Umemura et al. 23 02-12-1991 4,992,257 Bonnett et al. 24 04-1991 5,007,898 Rosenbluth et al. 25 5,021,044 06-04-1991 Sharawy 09-22-1992 26 5,149,319 Unger 27 5,158,071 10-27-1992 Umemura et al. 28 5,163,421 11-17-1992 Bernstein et al. 29 5,190,766 03-02-1993 Ishihara

-v2	minar	Signati	IFO
		Signati	

Date Considered

^{*}Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

 $[\]mathsf{T}^1$ - Place a check mark in this area when an English language Translation is attached.

		- 1 1 3 0 D TO Equivalent
	Application No.	10/782,383
INFORMATION DISCLOSURE	Filing Date	February 19, 2004
STATEMENT BY APPLICANT	First Named Inventor	Katsuro Tachibana
OTATEMENT BY ALLEGANT	Art Unit	1635
(Multiple sheets used when necessary)	Examiner	Richard A. Schnizer
SHEET 2 OF 6	Attorney Docket No.	EKOS.8CP3DV1C4

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number Number - Kind Code (if known) Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name of Patentee or Applicant	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	30	5,197,946	03-30-1993	Tachibana	
	31	5,250,034	10-05-1993	Appling et al.	
	32	5,267,954	12-07-1993	Nita	
	33	5,267,985	12-07-1993	Shimada et al.	
	34	5,269,291	12-14-1993	Carter	
	35	5,282,785	02-01-1994	Shapland et al.	
	36	5,286,254	02-15-1994	Shapland et al.	
	37	5,295,484	03-22-1994	Marcus et al.	
	38	5,304,115	04-19-1994	Pflueger et al.	
	39	5,318,014	06-07-1994	Carter	
	40	5,323,769	06-28-1994	Bommannan et al.	
	41	5,327,891	07-12-1994	Rammler	
	42	5,328,470	07-12-1994	Nabel et al.	
	43	5,344,435	09-06-1994	Turner et al.	
	44	5,345,940	09-13-1994	Seward et al.	
	45	5,353,798	10-11-1994	Sieben	
	46	5,354,279	10-11-1994	Hofling	
	47	5,362,309	11-08-1994	Carter	
-	48	5,363,853	11-15-1994	Lieber	
	49	5,368,036	11-29-1994	Tanaka et al.	
, ,	50	5,380,273	01-10-1995	Dubrul et al.	
	51	5,390,678	02-21-1995	Gesswein et al.	
	52	5,419,763	05-1995	Hildebrand	
	53	5,421,338	06-06-1995	Crowley et al.	
	54	5,423,797	06-13-1995	Sorin et al.	
	55	5,431,663	07-11-1995	Carter	
	56	5,445,155	08-29-1995	Sieben	
	57	5,447,509	09-051995	Mills et al.	
	58	5,458,568	10-17-1995	Racchini et al.	

Examiner	Signat	lure
----------	--------	------

Date Considered

^{*}Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

T¹ - Place a check mark in this area when an English language Translation is attached.

	Application No.	10/782,383
INFORMATION DISCLOSURE	Filing Date	February 19, 2004
STATEMENT BY APPLICANT	First Named Inventor	Katsuro Tachibana
OTATEMENT BY AFFEIGANT	Art Unit	1635
(Multiple sheets used when necessary)	Examiner	Richard A. Schnizer
SHEET 3 OF 6	Attorney Docket No.	EKOS.8CP3DV1C4

			U.S. PATENT	DOCUMENTS	
Examiner Initials	Cite No.	Document Number Number - Kind Code (if known) Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name of Patentee or Applicant	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	59	5,465,726	11-14-1995	Dickinson et al.	
	60	5,474,530	12-12-1995	Passafaro et al.	
	61	5,474,531	12-12-1995	Carter	
	62	5,489,279	02-06-1996	Meserol	
-	63	5,498,238	03-12-1996	Shapland et al.	
	64	5,509,896	04-23-1996	Carter	
	65	5,514,092	05-07-1996	Forman et al.	
	66	5,520,189	05-28-1996	Malinowski et al.	
	67	5,542,935	08-1996	Unger et al.	
	68	5,567,687	10-22-1996	Magda et al.	
	69	5,569,198	10-29-1996	Racchini	
	70	5,594,136	01-14-1997	Sessier et al.	
	71	5,599,923	02-04-1997	Sessier et al.	
	72	5,603,327	02-18-1997	Eberle	
	73	5,606,974	03-04-1997	Castellano et al.	
	74	5,616,342	04-01-1997	Lyons	
	75	5,617,851	04-08-1997	Lipkovker	
	76	5,618,275	04-08-1997	Bock	
	77	5,620,479	04-15-1997	Diederich	
	78	5,628,728	05-13-1997	Tachibana et al.	
	79	5,628,730	05-13-1997	Shapland	
	80	5,630,837	05-20-1997	Crowley	
	81	5,632,970	05-27-1997	Sessier et al.	
	82	5,660,180	08-26-1997	Malinowski et al.	
	83	5,663,327	09-02-1997	Tarabo et al.	
	84	5,695,460	12-09-1997	Siegal et al.	
	85	5,707,608	01-13-1998	Liu	
	86	5,725,494	03-10-1998	Brisken	
	87	5,733,572	03-31-1998	Unger et al.	

Examiner Signature	Date Considered
--------------------	-----------------

^{*}Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

T¹ - Place a check mark in this area when an English language Translation is attached.

	Application No.	10/782,383
INFORMATION DISCLOSURE	Filing Date	February 19, 2004
STATEMENT BY APPLICANT	First Named Inventor	Katsuro Tachibana
STATEMENT BY APPLICANT	Art Unit	1635
(Multiple sheets used when necessary)	Examiner	Richard A. Schnizer
SHEET 4 OF 6	Attorney Docket No.	EKOS.8CP3DV1C4

			U.S. PATENT	DOCUMENTS	
Examiner Initials	Cite No.	Document Number Number - Kind Code (if known) Example: 1,234,567 B1	Publication Date MM-DD-YYYY	Name of Patentee or Applicant	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
	88	5,735,811	04-07-1998	Brisken	
	89	5,770,222	06-23-1998	Unger et al.	
	90	5,779,644	07-1998	Eberle et al.	
	91	5,846,218	12-08-1998	Brisken et al.	
	92	5,849,727	12-15-1998	Porter et al.	
	93	5,916,192	06-29-1999	Nita et al.	
	94	5,997,497	12-07-1999	Nita et al.	
	95	6,001,069	12-14-1999	Tachibana et al.	
	96	6,024,718	02-15-2000	Chen et al.	
	97	6,096,000	08-01-2000	Tachibana, et al.	
	98	6,117,858	09-12-2000	Porter et al.	
	99	6,136,792	10-2000	Henderson	
	100	6,210,356	04-03-2001	Anderson et al.	
	101	6,228,046	05/08/01	Brisken	
	102	6,245,747	06/12/01	Porter et al.	
	103	6,287,271	09/11/01	Dubrul et al.	
	104	6,372,498	04/16/02	Newman et al.	

	FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document Country Code-Number-Kind Code Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name of Patentee or Applicant	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	τ1	
	105	DE 39 19 592 A1	02-22-1990	Olympus Optical Co.			
	106	DE 40 05 743	08-29-1991	Wolf GMBH Richard			
	107	EP 0 529 675	08-31-1992	Ethicon Inc.			
	108	EP 0 629 382	11-08-1993	Vidamed Inc.			
	109	EP 668052 A2	02-17-1995	Olympus Optical Co.			
	110	WO 89/04142	05-18-1989	Circulation Res Ltd.			
	111	WO 91/09629	07-11-1991	Unger Evan C			
	112	WO 92/07622	05-14-1992	BSD Medical Corp.			

Examiner Signature	Date Considered

^{*}Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

T¹ - Place a check mark in this area when an English language Translation is attached.

PTO/SB/08 Equivalent

	Application No.	10/782,383
INFORMATION DISCLOSURE	Filing Date	February 19, 2004
STATEMENT BY APPLICANT	First Named Inventor	Katsuro Tachibana
STATEMENT BY AFFEIGANT	Art Unit	1635
(Multiple sheets used when necessary)	Examiner	Richard A. Schnizer
SHEET 5 OF 6	Attorney Docket No.	EKOS.8CP3DV1C4

			FOREIGN PATE	ENT DOCUMENTS		
Examiner Initials	Cite No.	Foreign Patent Document Country Code-Number-Kind Code Example: JP 1234567 A1	Publication Date MM-DD-YYYY	Name of Patentee or Applicant	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T ¹
	113	WO 93/08738	05-13-1993	Mayo Foundation		
	114	WO 94/05361	03-17-1994	Cortrak Medical Inc.		
	115	WO 95/01751	01-19-1995	Boston Scientific Corp.		
	116	WO 96/27341	09-12-1996	Ekos LLC		
	117	WO 96/29935	10-03-1996	Boston Scientific Corp.		
	118	WO 96/35469	11-14-1996	Cardiogenesis Corp.		
	119	WO 96/36286	11-21-1996	Coraje Inc.		
	120	WO 97/19645	06-05-1997	Pharmasonics Inc.		
,	121	WO 98/11826	03-26-1998	Heart Rhythm Tech Inc.		
	122	WO 98/48711	11-05-1998	Ekos Corp.		

	_	NON PATENT LITERATURE DOCUMENTS	· · · · ·
Examiner Initials	Cite No.	itam (haak magazina igurnal garial symnosiym gatalag ata) data naga(s) yalyma issyo	
	123	Bao, et al. "Transfection of a Reporter Plasmid into Cultured Cells by Sonoporation In Vitro," Ultrasound in Med. & Biol., Vol. 23, No. 6, pp. 953-959, 1997.	
	124	Fechheimer, et al. "Transfection of Mammalian Cells with Plasmid DNA by Scrape Loading and Sonication Loading," <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 84, pp. 8463-8467, December 1987.	
	125	Feldman, et al. "Optimal Techniques for Arterial Gene Transfer," Cardiovascular Research, 35 (1997) pp. 391-404.	
	126	Kim, et al. "Ultrasound-Mediated Transfection of Mammalian Cells," <i>Human Gene Therapy</i> , 7:1339-1346 (July 10, 1996).	
	127	Kotnis, et al. "Optimisation of Gene Transfer into Vascular Endothelial Cels Using Electroporation," Eur J Vasc Endovasc Surg, 9, 71-79 (1995).	
	128	Porter, et al. "Interaction of Diagnostic Ultrasound with Synthetic Oligonucleotide-Labeled Perfluorocarbon-Exposed Sonicated Dextrose Albumin Microbubbles," <i>J Ultrasound Med</i> , 15:577-584, 1996.	
	129	Tsurumi, et al. "Direct Intramuscular Gene Transfer of Naked DNA Encoding Vascular Endothelial Growth Factor Augments Collateral Development and Tissue Perfusion," <i>Circulation</i> , 1996;94:3281-3290.	
	130	Unger, et al. "Ultrasound Enhances Gene Expression of Liposomal Transfection," <i>Investigative Radiology</i> , Vol. 32, No. 12, pp. 723-727, 1997.	
	131	Wyber, et al. "The Use of Sonication for the Efficient Delivery of Plasmid DNA into Cells," Pharmaceutical Research, Vol. 14, No. 6, pp. 750-756, 1997.	

Examiner Signature	Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

T¹ - Place a check mark in this area when an English language Translation is attached.

PTO/SB/08 Equivalent

		TO TO Equitation
	Application No.	10/782,383
INFORMATION DISCLOSURE	Filing Date	February 19, 2004
STATEMENT BY APPLICANT	First Named Inventor	Katsuro Tachibana
STATEMENT DI AFFEICANT	Art Unit	1635
(Multiple sheets used when necessary)	Examiner	Richard A. Schnizer
SHEET 6 OF 6	Attorney Docket No.	EKOS.8CP3DV1C4

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No.	The state of the s	
	132	Hynynen, et al. "Small Cylindrical Ultrasound Sources for Induction of Hyperthermia via Body Cavities of Interstitial Implants," <i>Arizona Cancer Center and Department of Radiation Oncology</i> , University of Arizona Health Sciences Center, Vol. 9, No. 2, pp. 263-274, 1993	
	133	Lee, et al. "Arrays of Multielement Ultrasound Applicators for Interstitial Hyperthermia," IEEE Transactions on Biomedical Engineering, Vol. 46, No. 7, July 1999.	
	134	Maywal, et al. "Experience with Atraumatic Vascular Diagnosis with the aid of the Ultrasonic Doppler Technique," <i>Electromedica</i> , Vol. 2, pp. 43-48, 1976.	
	135	Japanese Journal of Cancer Research, Vol. 81, No. 3, pp. 304-308, March, 1990.	
	136	Cancer Letters, Vol. 78 (1-3), pp. 177-181, 1994.	
	137	Cancer Letters, Vol. 72, pp. 195-199, 1993.	

2798741 080106

Examiner Signature Date Considered

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.